114. (NEW) The method of claim 47, wherein the cancer is breast cancer.

115. (NEW) The method of claim 113, wherein the biological sample is a breast cancer tumor.

116. (NEW) The method of claim 47, wherein the control is normal tissue from a normal subject.

117. (NEW) The method of claim 116, wherein the control is normal tissue from the subject having cancer.

118. (NEW) The method of claim 47, wherein the anti-cancer therapy is a DNA damaging anti-cancer therapy.

119. (NEW) The method of claim 47, wherein the anti-cancer therapy is radiation therapy.

120. (NEW) The method of claim 47, wherein the anti-cancer therapy is chemotherapy.

121. (NEW) The method of claim 47, further comprising administering to the subject at risk of being non-responsive to an anti-cancer therapy, a demethylating agent and an anti-cancer therapy.

122. (NEW) The method of claim 47, further comprising administering to the subject at risk of being non-responsive to an anti-cancer therapy, an anti-cancer therapy selected from the group consisting of biological response modifying therapy, immunotherapy, cancer vaccine therapy, hormone therapy and angiogenesis inhibiting therapy.

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